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**12 BAND
ULTRA**

Operating Instructions

**12 BAND™
ULTRA PERFORMANCE
DIGITAL RADAR/LASER
DETECTOR WITH XTREME
RANGE SUPERHETERODYNE®
TECHNOLOGY**

XRS 9640

Printed in China
Part No. 490-419-P
Version A

Nothing Comes Close to a Cobra®

English



Introduction

Important Information and Customer Assistance

Important Information

Federal Laws Governing the Use of Radar Detectors

It is not against federal law to receive radar transmissions with your Cobra radar/laser detector. The Communications Act of 1924 guarantees your right to receive radio transmissions on any frequency. Local laws that contravene this Act, while illegal, may be enforced by your local law enforcement officials until and unless they are prohibited from doing so by federal court action.

Safety Alert

Use of this product is not intended to, and does not, ensure that motorists or passengers will not be involved in traffic accidents. It is only intended to alert the motorist that an emergency vehicle equipped with a Cobra Safety Alert transmitter is within range as defined by that product. Please call local fire and police departments to learn if coverage exists in your area.

Safe Driving

Motorists, as well as operators of emergency or service vehicles, are expected to exercise all due caution while using this product, and to obey all applicable traffic laws.

Security of Your Vehicle

Before leaving your vehicle, always remember to conceal your radar detector in order to reduce the possibility of break-in and theft.



Customer Assistance

Customer Assistance

Should you encounter any problems with this product, or not understand its many features, please refer to this owner's manual. If you require further assistance after reading this manual, Cobra Electronics offers the following customer assistance services:

For Assistance in the U.S.A.

Automated Help Desk English only. 24 hours a day, 7 days a week 773-889-3087 (phone).

Customer Assistance Operators English and Spanish. 8:00 a.m. to 6:00 p.m. Central Time Mon. through Fri. (except holidays) 773-889-3087 (phone).

Questions English and Spanish. Faxes can be received at 773-622-2269 (fax).

Technical Assistance English only. www.cobra.com (on-line: Frequently Asked Questions). English and Spanish. productinfo@cobra.com (e-mail).

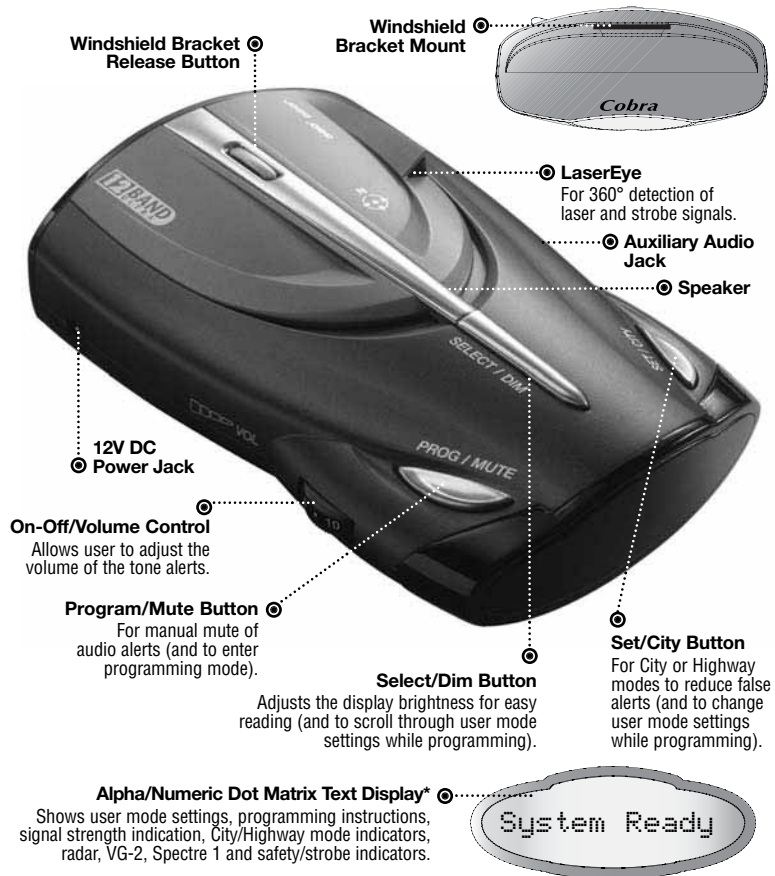
For Assistance Outside the U.S.A.

Contact Your Local Dealer

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6500 West Cortland Street
Chicago, Illinois 60707 USA
www.cobra.com

A1 English

Controls, Indicators, Connections and Display



* See pages 5 – 26 for more information about display features.



WARNING
Modifications or parts substitutions not approved by Cobra Electronics Corporation may violate FCC Rules and void your authority to operate this equipment.

Product Features

Congratulations! You've made a smart choice by purchasing an ultra high performance digital radar/laser detector from Cobra. Just look at some of the sophisticated features and capabilities your new unit includes:

Xtreme Range Superheterodyne Technology

With super-fast sweep circuitry, XRS provides extra detection range and the best possible advance warning to even the fastest radar guns

Ultra Performance

Provides advanced warning with extra detection range

Detection and Separate Alerts

For radar signals (X, K, Ka and Ku bands, with signal strength indicated), laser signals, Safety Alert signals, Strobe Alert signals, VG-2 signals, Spectre 1 signals

8-Point Compass

Displays direction of travel

LaserEye

For 360° detection of laser and strobe signals

Instant-On Ready

Detects radar guns with “instant-on” (very fast) speed monitoring capabilities

Pop Detection

Detects the latest super-fast instant-on signal pulse radar guns

Tone Alert

With adjustable volume

DigiView Data Display

With easy-to-read alpha/numeric dot matrix text readout

This booklet describes the simple steps for mounting and setting up your detector. It also provides helpful information about how radar and laser guns are used and how you can interpret the alerts you receive.

IntelliShield Highway/City Modes

Reduces falsing in urban areas with Highway mode and three levels of City mode settings

Safety Alert

Traffic warning system distinguishes important safety alerts from other K band signals

Strobe Alert

Emergency vehicle warning system

Manual Mute or Auto Mute

A mute function of audio alerts

IntelliMute

A mute function which automatically reduces false alerts by sensing engine RPMs

Smart Power

A timed power saving function that saves your car's battery

EasySet Programming

User-friendly mode selection and setting with visual guidance

Auxiliary Audio Jack

For external speaker connection

Mounting

Mounts easily on windshield or dashboard

Ordering From U.S.A.

Call 773-889-3087 for pricing or visit www.cobra.com.

For Credit Card Orders

Call 773-889-3087 [Press one from the main menu] 8:00 a.m. to 6:00 p.m. Central Time, Monday through Friday.

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6500 West Cortland Street, Chicago, IL 60707 U.S.A.

To Order Online

Please visit our website: www.cobra.com

Item #	Description
420-030-N-001	Straight 12V Power Cord
420-026-N-001	Coiled 12V Power Cord
545-159-N-001	Windshield Mounting Bracket
CLP-2B	Dual Port Power Adapter



Introduction

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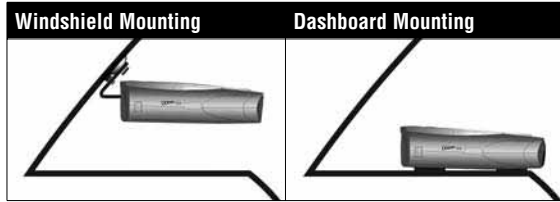
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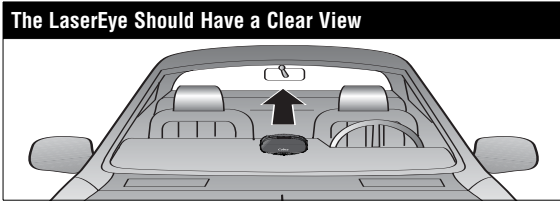
Installation

Where to Mount Your Unit

You will get optimum performance from your detector if you **Mount** it at a point approximately in the center of the vehicle, as low as possible on the front windshield without obstructing the unit's view of the road either to the front or rear. You can also mount it directly on the dashboard.





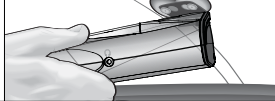



The unit's lens must not be blocked and the LaserEye should have a clear view out the back window to allow 360° detection.



Radar and laser signals pass through glass but not through other materials and objects. Objects that can block or weaken incoming signals include:

- Windshield wiper blades
- Mirrored sun screens
- Dark tinting at the top of the windshield
- Heated windshields currently available on some vehicles (Instaclear for Ford, Electriclear for GM). Consult your dealer to see if you have this option.

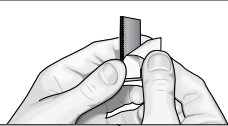
Windshield Mounting

1. Attach the rubber cups to the bracket.	
2. Make sure the rubber cups and your windshield are clean.	
3. Push the bracket firmly onto the windshield.	
4. Attach the detector to the bracket. Check the angle of the unit.	
5. To adjust the angle if necessary, gently push or pull on the bracket to bend it. DO NOT use the detector to bend the bracket.	
6. Plug the power cord into the detector.	
7. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.	
8. You can temporarily remove the detector whenever you wish by pressing the bracket release button and sliding it off the bracket.	

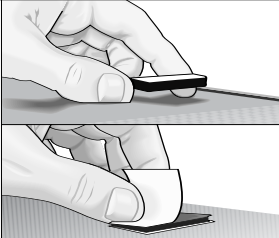
Dashboard Mounting

1. Place the detector on the dashboard to find a location where the unit has a clear, level view of the road. The angle can NOT be adjusted after mounting.

2. Remove the paper backing from one side of the hook-and-loop fastener.



3. Attach the pad to the dashboard at your chosen location and remove the other paper backing.



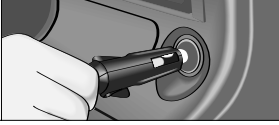
4. Attach the detector to the hook-and-loop fastener. You can remove and reattach the unit as often as you like.



5. Plug the power cord into the detector.



6. Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.



Getting Started



To Turn On the Unit and Adjust the Audio Volume		
Rotate the On-Off/Volume control clockwise (away from you).	Tone	Visual Display
	Three beeps	Testing System Ready The display will then cycle through the user mode settings (city or highway, Intellimute and SmartPower status).
	Start-up is complete when the display continuously shows the current compass direction (N, NE, E, SE, S, SW, W or NW) plus single letters indicating current user mode settings (c = City mode, City X Beep Off mode and City X+K mode, h = Highway mode, i = Intellimute on).	



NOTE
In some vehicles, power is supplied to the cigarette lighter even while the ignition is off. If this is the case with your vehicle and you have turned the SmartPower off, you should turn off or unplug your detector when parking for lengthy periods. Cobra recommends leaving SmartPower at the factory setting, which is on.

EasySet Programming

All user mode settings on your detector can be changed by using Program mode. When changing the settings, please keep in mind:

- Buttons can have multiple functions.
- All settings will be stored in memory when the power is turned off and recalled when the power is turned back on.

The procedure for using Program mode is shown on page 7.



NOTE

You cannot enter Program mode during an alert. The unit will not detect signals while in Program mode. During programming, if no buttons are pushed for ten seconds, the unit will automatically exit Program mode and save the last settings.

Programming User Modes

The tables on pages 8 through 9 show you how to program all user modes and the settings you can choose from.



NOTE

On the following pages, you will find more detailed explanations of each setting.

See page 14 for instructions on setting the IntelliMute activation point.

See page 16 for instructions on calibrating the compass.

See page 21 for instructions on using SmartPower.

Set/City Button 

Press and release

Select/Dim Button 

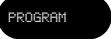

Press and release

Program/Mute Button

Press and hold/Press and release 



To Use Program Mode

	Tone	Visual Display
Press and hold the Program/Mute button for two seconds.	Three beeps	Program will appear.  Then brief programming instructions will scroll through the display three times.
While the programming instructions are scrolling, press and release the Select/Dim button to cycle through the user modes.	One beep with each button press	As each mode is displayed, the current setting for that mode will be shown.
With the user mode you wish to change displayed, press and release the Set/City button to change the setting. To move to the next selection, press the Select/Dim button again.	One or two beeps, depending on your selection	The setting you select will be shown.
When you have finished programming any or all of the user modes, press and release the Program/Mute button to exit Program mode. Or simply wait ten seconds without pushing any buttons.	One beep	When you exit Program mode, the new setting will automatically be saved and EXIT PROGRAM and Settings Saved! will appear in the display. 



This EasySet programming menu lists all of the modes and settings you can choose from after you have entered Program mode as described on page 7.

EasySet Programming Menu			
Mode	Tone	Visual Setting	Result
Set IntelliShield City mode default*	Two beeps	City X	A single beep sounds when the signal is first detected.
	One beep	City X beep Off	Audio for all X band alerts are blocked until signal strength reaches Level 3.
	One beep	City X+K	Combines the City X mode with prevention of K band audio alerts until signal strength reaches Level 2.
IntelliMute mode	Two beeps	IntelliMute On	All alerts (except for strobe signals from emergency vehicles) are automatically muted below the engine rev point you set.
	One beep	IntelliMute Off	Normal operation.
Set IntelliMute RPMs (not shown if IntelliMute is off)	One beep	Set IntelliMute (see page 14 to set activation point)	Allows you to set the engine rev point while using IntelliMute.
AutoMute mode	Two beeps	AutoMute On	The audio volume of all alerts will be automatically muted after four seconds for as long as the signal is detected.
	One beep	AutoMute Off	All alerts will sound at full volume for as long as the signal is detected.
Set compass	One beep	Set Compass (see page 16 to calibrate compass)	Allows you to calibrate the compass.
Pop Detect mode	Two beeps	Pop Detect On	Unit will detect Pop signals.
	One beep	Pop Detect Off	Unit not will detect Pop signals.

* The settings for these user modes can also be changed with the one button method. See description of each user mode (pages 10 and 23) for details.



Mode	Tone	Visual Setting	Result
VG-2 Detect mode	Two beeps	VG-2 Detect On	Unit will detect VG-2 signals.
	One beep	VG-2 Detect Off	Unit will not detect VG-2 signals.
VG-2 Audio mode (not shown if VG-2 detect is off)	Two beeps	VG-2 Audio On	With VG-2 Detect on, the unit will give audible alerts for VG-2 signals.
	One beep	VG-2 Audio Off	With VG-2 Detect off, the unit will give only visual alerts for VG-2 signals.
Spectre 1 Detect mode	Two beeps	Spectre 1 Detect On	Unit will detect Spectre 1 signals.
	One beep	Spectre 1 Detect Off	Unit will not detect Spectre 1 signals.
Spectre 1 Audio mode (not shown if Spectre 1 detect is off)	Two beeps	Spectre 1 Audio On	With Spectre 1 Detect on, the unit will give audible alerts for Spectre 1 signals.
	One beep	Spectre 1 Audio Off	With Spectre 1 Detect off, the unit will give only visual alerts for Spectre 1 signals.
SmartPower mode	Two beeps	SmartPower On	SmartPower is on.
	One beep	SmartPower Off	SmartPower is off.
X Band detect mode	Two beeps	X Band On	Unit will detect X Band signals.
	One beep	X Band Off	Unit will not detect X Band signals.
K or Ku Band detect mode	Two beeps	K or Ku Band On	Unit will detect K or Ku Band signals.
	One beep	K or Ku Band Off	Unit will not detect K or Ku Band signals.
Set display Dim mode default*	Two beeps	Display Dim	Partially dimmed for dusk or night driving.
	One beep	Display Dimmer	More dimmed for dusk or night driving.
	One beep	Display Dark	Display is off.
Restore factory settings	One beep	Restore Factory Settings	Resets user modes and settings to factory default.
Exit program	One beep	EXIT PROGRAM	Allows you to exit Program mode.



Settings

IntelliShield Highway/City Modes

Your detector is equipped with IntelliShield false signal rejection technology which consists of a **Highway** mode and three different levels of **City** modes: City X, City X Beep Off and City X+K. **City X** mode sounds a single beep when the signal is first detected. **City X Beep Off** mode prevents all X band audio alerts until the signal strength reaches Level 3. **City X+K** mode combines the City X mode with prevention of K band audio alerts until the signal strength reads Level 2. This will reduce false alerts while you are driving in or near urban areas where there are many sources for conflicting X or K band signals such as microwave towers and automatic door openers. The factory setting is Highway. The factory City mode default setting is City X.



To Change From Highway Mode to City Mode

Press and release the Set/City button.	Tone	Visual Display
	One beep	c appears in the display

City Mode



NOTE

When you change to City mode, the unit will enter whichever city default mode is set at the time.

To Change From City Mode Back to Highway Mode

Press and release the Set/City button again.	Tone	Visual Display
	Two beeps	h appears in the display

Highway Mode



Setting City Default

You can set the default level for City mode (City X, City X Beep Off and City X+K) either in Program mode or directly using the **Set/City** button.



To Set the City Mode Default Directly Using the Set/City Button

Press and hold the Set/City button.	Tone	Visual Display
	One beep each time the display cycles	Cycles — see chart above
Release the Set/City button to select the current display as default.	None	City X Beep Off , City X+K or City X


To Set the City Mode Default Using Program Mode
(See Page 7 For Instructions on Using Program Mode)

In Program mode, go to City.	Tone	Visual Display
	One beep	City X Beep Off
	One beep	City X+K
	Two beeps	City X



Muting an Alert

Your detector allows you to quickly turn off an **Audio Alert** by momentarily pressing the Program/Mute button. If you press the Program/Mute button a second time during the Alert, the Audio Alert will be turned back on.

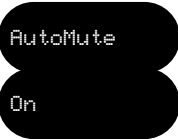
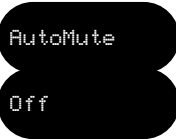
Program/Mute Button  Press and release



To Turn On or Off an Audio Alert Using the Program/Mute Button		
Press and release the Program/Mute button.	Tone	Visual Display
	None	None

Auto Mute Mode


Auto Mute will automatically reduce the audio volume of all alerts after four (4) seconds for as long as the signal is detected. The factory setting for Auto Mute is on.

To Turn Auto Mute On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)			
In Program mode, go to Auto Mute.	Tone		Visual Display
	Two beeps		Auto Mute On
	One beep		Auto Mute Off
	Auto Mute On	Auto Mute Off	
			

Auxiliary Audio Jack

The **Auxiliary Audio Jack** can be used to connect an external speaker in environments with high ambient noise levels. The internal speaker will be disconnected.



Auxiliary  Audio Jack

IntelliMute


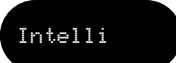
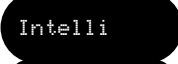
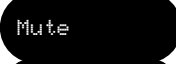



IntelliMute is a unique new feature that allows you to avoid alerts you don't need to hear because you are stopped or moving slowly. By sensing the "revs" (RPMs) of your engine, **IntelliMute** knows when you are at low speed and automatically mutes alerts (except for strobe signals from emergency vehicles).

Before IntelliMute will work, you must set an activation point for your engine's revs (see page 14). Whenever the revs are below that point, IntelliMute will begin muting. The activation point will be stored in memory and recalled each time the power is turned on. An **i** will appear in the display when IntelliMute is on. The factory setting is IntelliMute off.



NOTE

IntelliMute may not work with some vehicles because it cannot sense the engine's revs. In such cases, you can reduce unwanted audio alerts by using Auto Mute and City mode when appropriate.

To Turn IntelliMute On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)		
In Program mode, go to IntelliMute.	Tone	Visual Display
	Two beeps	IntelliMute On , then i appears in the display
	One beep	IntelliMute Off
	IntelliMute On	IntelliMute Off
		
		
		
		

What to Remember While Using IntelliMute

IntelliMute works with all City and Auto Mute modes.

Whenever engine revs are below the activation point, an arrow pointing down will appear in the display. Above the activation point, an arrow pointing up will appear.

Below Activation Point Above Activation Point



If, for any reason, the unit stops sensing your engine's revs, IntelliMute will indicate an error and automatically turn off.

The rev point you set will be stored in the unit's memory when power is turned off and recalled each time the power is turned on.

NOTE
The rev point must be reset if you use your detector in a different vehicle.

NOTE
When initially choosing your IntelliMute activation point, a setting of approximately 300 to 600 RPMs above idle is recommended. You can reset the activation point at any time to fit your individual preferences and driving style.

Setting the IntelliMute Activation Point

Your detector must be installed in your vehicle.

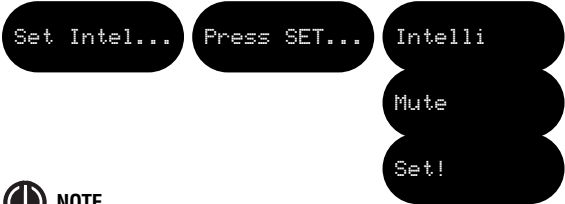
CAUTION
Do not attempt to set the rev point while driving. Your vehicle should be parked and idling.

IntelliMute must be turned on before setting the activation point.



To Set the IntelliMute Activation Point Using Program Mode (See Page 7 For Instructions on Using Program Mode)		
In Program mode, go to Set IntelliMute.	Tone	Visual Display
Press and release the Set/City button to begin setting IntelliMute RPMs.	Two beeps	Press SET at desired RPMs...
Rev your engine to the level you wish to set. Rev the engine slightly above idle and hold revs steady for two seconds.	None	None
At the desired rev level, press and release the Set/City button.	Three beeps	IntelliMute Set!
Press and release either the Select/Dim button to proceed to the next user mode or the Program/Mute button to exit the Program mode.	None	None

Setting IntelliMute RPMs



NOTE
If the unit is unable to sense usable pulses within three seconds or if you do not set a rev point within 20 seconds of beginning these steps, IntelliMute will indicate an error and automatically turn off.

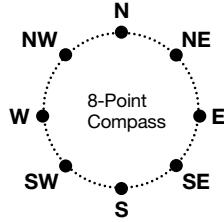
Tone	Visual Display
One beep	IntelliMute not set Please try again
One beep	IntelliMute Off



Nothing Comes Close to a Cobra®

Compass

Your detector includes an internal 8-point **Compass** that will continuously display your current direction of travel: N, NE, E, SE, S, SW, W or NW.



Calibrating the Compass



NOTE

Before using it for the first time, you must calibrate the compass to provide accurate indications of direction. See page 7 for instructions on using the Program mode to select Set Compass.

Calibration allows the compass electronics to measure and store information about the magnetic fields generated by your vehicle.

The compass will remain accurately calibrated as long as your detector is mounted in the same place in your vehicle. If you change the location where the unit is mounted or move it to another vehicle, you must recalibrate the compass.

The compass temporarily may not provide accurate readings if you are inside a building or enclosure, or are close to a large metal tractor/trailer, truck, or train. Once you are away from such a location, the compass will work correctly again.



NOTE

When the instructions direct you to drive in two circles, a large parking lot is the most convenient place to do so. It does not matter what direction your vehicle is pointing when you start the circles, which direction you go to make the circles, and it does not have to be exactly two circles. You do NOT have to make perfect circles. You can drive in any pattern, as long as you make two complete turns. Four three-point turns, two small squares, or any two complete loops will work as well as two circles. It does not matter what size the circles are, if your speed is constant, or how fast you make the circles [but less than two minutes]. Please be careful when making the circles and watch for other traffic.

Select/Dim Button

Program/Mute Button

Set/City Button

To Calibrate the Compass Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to Set Compass.	Tone	Visual Display
	None	Set Compass
Press and release the Set/City button to begin setting the compass.	One beep	Drive in 2 circles... Press SET when done...
Within two minutes, drive your vehicle in a circle twice, then press the Set/City button again.	Three beeps	Compass Set! For two seconds followed by direction of travel (N, NE, E, SE, S, SW, W or NW)
Press and release either the Select/Dim button to proceed to the next user mode or the Program/Mute button to exit Program mode.	None	None

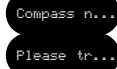


NOTE

If you do not press the **Set/City** button within two minutes after beginning the set compass process, compass calibration will automatically terminate.

Tone	Visual Display
One beep	Compass not set... Please try again...

Terminate





Pop Alert

Pop Alert will alert you of Pop radar signals. During the alert, the unit continues to detect other signals. The factory setting is Pop Detect off.

To Turn Pop Detect Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to Pop Detect.	Tone		Visual Display	
	Two beeps		Pop On	
	One beep		Pop Off	
	Pop Detect On		Pop Detect Off	
	<div>Pop On</div>		<div>Pop Off</div>	

K, Ku and X Band Detection

The new **Ku Band** may be introduced to North America in the future. To prevent false alerts until it is, the factory default for **Ku Band** detection is off. In parts of North America, annoying false alerts from door openers and similar devices are triggered on the **X Band** and **K Band**. If desired, **X Band** or **K Band** can be turned off. The factory default for **X Band** and **K Band** detection is on.

To Turn X, K and/or Ku Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to X, K or Ku band.	Tone		Visual Display		Voice			
	Two beeps		X-Band On		X On			
	One beep		X-Band Off		X Off			
	Two beeps		K-Band On		K On			
	One beep		K-Band Off		K Off			
	Two beeps		Ku-Band On		Ku On			
	One beep		Ku-Band Off		Ku Off			
	K-Band On		K-Band Off		Ku-Band On		Ku-Band Off	
	K-Band On		K-Band Off		Ku-Band On		Ku-Band Off	



VG-2 Alert

The detector is undetectable by VG-2 detection devices and will alert you when such a device is in use near your vehicle. During the alert, the unit continues to detect other signals. You can choose whether or not you want your unit to show **VG-2 Alerts**. With VG-2 Detect mode on, you can also choose whether or not you want your unit to sound audible VG-2 Alerts. The factory settings are VG-2 Detect off and VG-2 Detect Audio off.

To Turn VG-2 Detect Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to VG-2 Detect.	Tone		Visual Display	
	Two beeps		VG2 On	
	One beep		VG2 Off	
	VG-2 Detect On		VG-2 Detect Off	
	VG2 On		VG2 Off	

To Turn VG-2 Audio Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

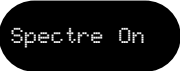
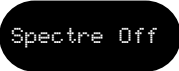
In Program mode, go to VG-2 Audio.	Tone		Visual Display	
	Two beeps		VG2 Audio On	
	One beep		VG2 Audio Off	
	VG-2 Audio On		VG-2 Audio Off	
	...Audio On		...Audio Off	





Spectre 1 Alert

The detector is undetectable by Spectre 1 detection devices and will alert you when such a device is in use near your vehicle. During the alert, the unit continues to detect other signals. You can choose whether or not you want your unit to show **Spectre 1 Alerts**. With Spectre 1 Detect mode on, you can also choose whether or not you want your unit to sound audible Spectre 1 Alerts. The factory settings are Spectre 1 Detect off, Spectre 1 Audio off.

To Turn Spectre 1 Detect Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to Spectre 1 Detect.	Tone	Visual Display
	Two beeps	Spectre On
	One beep	Spectre Off
	Spectre 1 Detect On	Spectre 1 Detect Off
		

To Turn Spectre 1 Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to Spectre 1 Audio.	Tone	Visual Display
	Two beeps	Spectre Audio On
	One beep	Spectre Audio Off
	Spectre 1 Audio On	Spectre 1 Audio Off
		



SmartPower



Your detector includes the **SmartPower** feature that, when activated, will put the unit into Standby mode (low power) for about 30 minutes after the car's engine has been turned off. After 30 minutes in Standby mode, the unit will automatically turn off.

SmartPower Entering
Standby Mode



Before SmartPower enters Standby mode, you will hear one beep and **Pwr Save** will appear on the display. To return the unit to normal Power mode or exit Standby mode, start the car, press any button or turn the unit off and then on again. The factory setting is SmartPower on.

To Turn SmartPower Mode On or Off Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to SmartPower.	Tone	Visual Display
	Two beeps	SmartPower On
	One beep	SmartPower Off
	SmartPower On	SmartPower Off
		

DigiView Data Display Brightness

Your detector has a **Bright** display mode (for daytime driving) and three levels of **Dim** display modes (**Dim** for dusk driving, **Dimmer** for night driving and **Dark** where no visual alerts will be displayed) to control the display's brightness levels. The factory setting is Bright. The factory Dim mode default setting is Dimmer.

Dark Indicator



Select/Dim Button

Press and release



To Change the Brightness to Dim

Press and release the **Select/Dim** button once.

Tone	Visual Display
Two beeps	Dim, Dimmer or Dark

Dim Display



Dimmer Display



Dark Display



NOTE

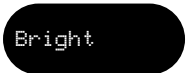
When you change to Dim mode, the unit will enter whichever dim default mode is set at the time.

To Change the Brightness to Bright

Press and release the **Select/Dim** button again.

Tone	Visual Display
One beep	Bright

Bright Display



Setting Dim Default

You can set the default level for Dim mode (Dim, Dimmer or Dark) either in Program mode or directly using the **Select/Dim** button.



To Set the Display Dim Mode Default Directly Using the Set/Dim Button

Press and hold the **Select/Dim** button

Tone	Visual Display
One beep each time the display cycles	Cycles — see chart above
Release the Select/Dim button to select the current display as default.	Dim, Dimmer or Dark

To Set the Display Dim Mode Default Using Program Mode (See Page 7 For Instructions on Using Program Mode)

In Program mode, go to Display Dim, Dimmer or Dark.

Tone	Visual Display
Two beeps	Dim
One beep	Dimmer
One beep	Dark



Detection

Signals Detected

The tables on the following pages show you the types of **Signals** your detector will detect, as well as the visual alerts it provides for each of them.

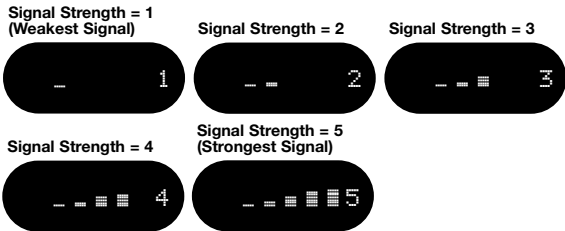
Audio Alerts

A distinctly different **Alert** tone is used for each type of signal detected (including separate tones for each laser signal). For X, K, Ka and Ku band radar signals, the tones will repeat faster as you approach the signal source. The repeat rate of the tones gives you useful information about the signal detected. See responding to alerts on page 27.

Visual Display

An indication of the type of signal detected will appear in the DigiView Data Display. During X, K, Ka and Ku alerts, you will also see from one to five vertical bars, indicating the strength of the signal detected.

Signal Strength Chart



Radar Signals and Visual Displays

Type of Signal	Visual Display
X Band Radar	X and Signal Strength
K Band Radar	K and Signal Strength
Ka Band Radar	Ka and Signal Strength
Ku Band Radar	Ku and Signal Strength
Pop Radar Mode	Pop

X Signal Detected
X _ _ 2

K Signal Detected
K _ _ _ 3

Ka Signal Detected
K a _ _ _ _ 5

Ku Signal Detected
K u _ _ _ _ 4

Pop Signal Detected
Pop

Laser Signals and Visual Displays

Type of Signal	Visual Display
LTI 20-20*	Laser 20/20
LTI Ultra-Lyte*	Laser UltraLyte
Kustom Signals ProLaser*	Laser Pro Laser
Kustom Signals ProLaser III*	Laser Pro Laser 3

LTI 20-20
Laser
20 / 20

LTI Ultra-Lyte
Laser
UltraLyte

Kustom Signals ProLaser
Laser
Pro Laser

Kustom Signals ProLaser III
Laser
Pro Laser 3

NOTE
Beep rate changes with different laser alerts.



Detection

Strobe Alert Signals and Visual Displays

Type of Signal	Visual Display
3M Opticom or Tomar*	Emergency Vehicle (Flashing)

* Your detector provides 360° detection of these signals.

Strobe Alert Display (Flashing)



Safety Alert Signals and Visual Displays

Type of Signal	Visual Display
Emergency Vehicles	Emergency Vehicle
Road Hazards	Road Hazard
Trains	Train

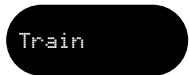
Emergency Alert
Signal Detected



Road Hazard Alert
Signal Detected



Train Alert Signal
Detected



NOTE

There are different tones for each Safety Alert.

VG-2 and Spectre 1 Alert Signals and Visual Displays

Type of Signal	Visual Display
VG-2 Alert	VG2
Spectre 1	Spectre1

Spectre 1 Alert
Signal Detected



VG-2 Alert
Signal Detected



NOTE

There are different tones for each alert.



Detection

Instant-On Detection

Your detector is designed to detect **Instant-On** speed monitoring signals, which can suddenly appear at full strength.



NOTE

You should take appropriate action immediately whenever an instant-on alert is given.

Pop Detection

Your detector is designed to detect single pulse mode radars. These radars are designed to have a low probability of detection. You should note that these radar guns have a much shorter range while in this mode.

Responding to Alerts

Description	Interpretation	Recommended Response
Tone repeats slowly at first, then speeds up rapidly.	Probably police radar.	FULL ALERT
Tone sounds one time only.	Probably a false alarm, but possibly pulsed radar, Spectre 1 or VG-2 nearby.	Exercise caution
Tone instantly begins repeating rapidly.	Radar, Spectre 1 or VG-2 nearby has been activated suddenly.	FULL ALERT
Pop mode tone.	Pop mode gun very close.	FULL ALERT
Tone repeats slowly as you approach a hill or bridge, then speeds up sharply as you reach it.	Probably police radar beyond the hill or bridge.	FULL ALERT
Tone repeats slowly for a short period.	Probably a false alarm.	Exercise caution
Any type of laser alert.	Laser alerts are never false alarms.	FULL ALERT
Any Safety Alert or Strobe Alert.	You are nearing an emergency vehicle, railroad crossing, or road hazard (construction, accident, etc.).	Exercise caution



Understanding Radar and Laser

Radar Speed Monitoring Systems

Three band frequencies have been approved by the Federal Communications Commission (FCC) for use by speed monitoring radar equipment:

X band	10.525 GHz
K band	24.150 GHz
Ka band	33.400 – 36.00 GHz

Your detector detects signals in all three radar bands, plus Ku band (13.435 GHz), which is an approved frequency used in parts of Europe and Asia.

VG-2 and Spectre 1

VG-2 and **Spectre 1** are “detector detectors” that work by detecting low-level signals emitted by most radar detectors. Your detector does not emit signals that can be detected by VG-2 or Spectre 1, but does detect VG-2 and Spectre 1 signals and will alert you when a device is in use near your vehicle, if you so choose.

Safety Alert Traffic Warning System



FCC-approved **Safety Alert** transmitters emit microwave radar signals that indicate the presence of a safety-related concern. Depending on the frequency of the signal emitted, it can indicate a speeding emergency vehicle or train, or a stationary road hazard.

Because these microwave signals are within the K band frequency, most conventional radar detectors will detect Safety Alert signals as standard K band radar. Your detector, however, is designed to differentiate between standard K band and Safety Alert signals, and give separate alerts for each.

Safety Alert technology is relatively new. Safety Alert transmitters can be found in limited numbers in all 50 states, but the number is growing. Depending on your location, you may not receive these alerts regularly and may often encounter emergency vehicles, trains and road hazards without being alerted. As the number of transmitters increases, these alerts will become more common.

When you receive such an alert, please watch for emergency vehicles ahead of you, on cross streets and behind you. If you see an emergency vehicle approaching, please pull over to the right side of the road and allow it to pass.



Strobe Alert

Special strobes mounted on the light bars of authorized emergency vehicles (fire trucks, police cars, ambulances) automatically change traffic signals as the vehicle approaches an intersection. These strobes and the special strobe detectors located on the traffic signals, introduced fairly recently by 3M and Tomar, are already in use in more than 1000 cities nationwide. Cobra's exclusive **Strobe Alert** detector will detect these special strobes and give an emergency vehicle alert.

When you receive such an alert, please watch for an approaching emergency vehicle and pull over to allow it to pass. To inquire about coverage in your area, contact your local fire and police departments.

LIDAR (Laser)

The correct name for the technology that most people refer to as laser is actually **LIDAR**, which stands for Light Detection and Ranging.

LIDAR operates much like radar. Its signal spreads out like a radar signal, though not as widely. Unlike radar, LIDAR must have a clear line of sight to its target vehicle throughout the entire measurement interval. Obstructions such as sign posts, utility poles, tree branches, etc., will prevent valid speed measurement.

Some common questions about LIDAR include:

- **Does weather have any affect on LIDAR?**
Yes. Rain, snow, smoke, fog, or airborne dust particles will reduce the effective range of LIDAR and can, if dense enough, prevent its operation.
- **Can LIDAR operate through glass?**
Yes. Newer LIDAR guns can obtain readings through most types of glass. However, the laser pulse also can be received through glass to trigger an alarm by your detector.
- **Can LIDAR operate while in motion?**
No. Because LIDAR operates by line of sight, the person using it cannot drive the vehicle, aim and operate the gun all at the same time.
- **Is LIDAR legal to use?**
Yes. It is legal in all 50 states.



Pop Radar Guns

The Pop mode **Radar Gun** is a single pulse Doppler radar that is a feature of a K and Ka (Bee III Ka radar gun) band Instant-On radar gun. It uses a single short time pulse to measure the target vehicle's speed. Despite the fact that the short, single pulse makes the unit very sensitive to officer hand and vehicle movement and reduces the range of the gun in Pop mode to 50% of its range in Continuous Wave mode, this feature is added in an attempt to make the radar gun invisible to Radar Detectors.

Although your detector can sense Pop signals beyond the effective range of Pop radar guns, there will be a signal to sense only if a gun is triggered. In addition, the Pop mode receiver section is more prone to false alerts because of its extra sensitivity. This is especially so in urban areas. As a result, you should consider using the Pop Detect mode only in highway and rural situations. Cobra Electronics has included a user selectable on or off Pop Detect mode.



Maintenance

Maintenance of Your Radar Detector

Your detector is designed and built to give you years of trouble-free performance without the need for service. No routine **Maintenance** is required.

If your unit does not appear to be operating properly, please follow these troubleshooting steps:

- Make sure the power cord is properly connected.
- Make sure the socket of your vehicle's cigarette lighter is clean and free of corrosion.
- Make sure the power cord's cigarette lighter adapter is firmly seated in your cigarette lighter.
- Check the power cord fuse. (Unscrew the ribbed end cap of the cigarette lighter adapter and examine the fuse. If required, replace it with a 2-amp fuse only.)



Specifications

Band and Frequencies

Band	Frequencies		
X Band	10.525	± 0.050	GHz
K Band	24.125	± 0.125	GHz
Safety Alert Traffic Warning System	24.070	± 0.010	GHz
	24.110	± 0.010	GHz
	24.190	± 0.010	GHz
	24.230	± 0.010	GHz
Ka Band	34.700	± 1.300	GHz
Ku Band	13.435	± 0.050	GHz
VG-2	11.500	± 0.250	GHz
Spectre 1	13.300	± 0.200	GHz
Laser	910	± 50	nm
Strobe	700	± 300	nm

This radar detector is covered by one or more of the following U.S. patents: 5,497,148; 5,594,432; 5,612,685; 6,078,279; 6,094,148; 6,621,447. Additional patents may be listed inside the product or pending.



Limited 1-Year Warranty

For Products Purchased in the U.S.A.

Cobra Electronics Corporation warrants that its Cobra 12 Band Radar/Laser Detectors, and the component parts thereof, will be free of defects in workmanship and materials for period of one year from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.

Cobra will, without charge, repair or replace, at its option, defective 12 Band Radar/Laser Detectors, products or component parts upon delivery to the Cobra Factory Service Department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra's expense, if the product is repaired or replaced under warranty.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

Exclusions: This limited warranty does not apply:

1. To any product damaged by accident.
2. In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
3. If the serial number has been altered, defaced or removed.
4. If the owner of the product resides outside the U.S.A.

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty.

Cobra shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.



Product Service

For any questions about operating or installing this new Cobra product, or if parts are missing...**PLEASE CALL COBRA FIRST...**do not return this product to the store. See customer assistance on page A1.

If this product should require factory service, please call Cobra first at 773-889-3087 BEFORE sending the product. This will ensure the fastest turnaround time on any repair.

If Cobra asks that the product be sent to its factory, the following must be furnished to have the product serviced and returned:

1. Send the complete unit, including power cord. (It is not necessary to include the mounting bracket.)
2. For warranty repair, enclose some form of proof-of-purchase, such as a photocopy or carbon copy of a sales receipt. If you send the original receipt, it cannot be returned.
3. Enclose a typed or clearly written description of the problem you are having with your unit, plus the name and address where you want the unit returned.
4. Pack the unit securely to prevent damage during transit. If possible, use the original packing materials.
5. Ship prepaid and insured using a traceable carrier such as United Parcel Service (UPS), Federal Express, or Priority mail with delivery confirmation. Ship to: Cobra Factory Service, Cobra Electronics Corporation, 6500 West Cortland Street, Chicago, IL 60707 U.S.A.
6. Please allow three to four weeks before contacting us about the status of your service. Call 773-889-3087 for assistance. If your unit is under warranty, it will either be repaired or replaced upon receipt, depending on the model. If your unit is out of warranty, you will receive a letter informing you of the repair or replacement charge.



Trademark Acknowledgement

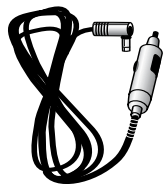
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Optional Accessories

You can find quality Cobra products and accessories at your local Cobra dealer, or in the U.S.A., you can order directly from Cobra. See order info on page 37.



Straight 12V DC Power Cord

Includes plug and fuse
Item # 420-030-N-001



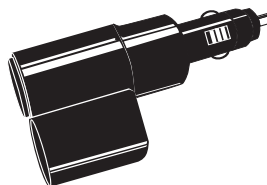
Windshield Mounting Bracket

Includes suction cups
Item # 545-159-N-001



Coiled 12V DC Power Cord

Includes plug and fuse
Item # 420-026-N-001



Dual Port Power Adapter

Includes adjustable plug
(up to 90°) and fuse
Item # CLP-2B